

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/062829 A2

(51) International Patent Classification: Not classified

(74) Agents: GOLD, Bryant, R. et al.; Advanced Bionics Corporation, 25129 Rye Canyon Road, Valencia, CA 91355 (US).

(21) International Application Number:
PCT/US2004/042711

(22) International Filing Date:
17 December 2004 (17.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/531,224 19 December 2003 (19.12.2003) US

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (for all designated States except US): ADVANCED BIONICS CORPORATION [US/US]; 25129 Rye Canyon Road, Valencia, CA 91355 (US).

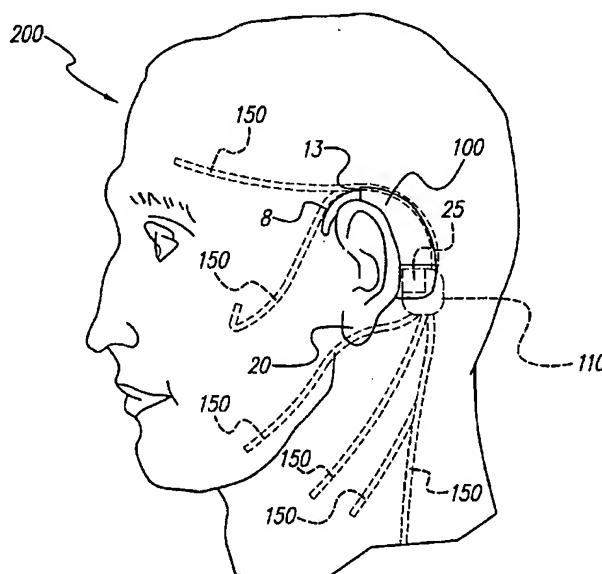
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): WHITEHURST, Todd, K. [US/US]; 28602 North Natalie Lane, Santa Clarita, CA 91390 (US). CARBUNARU, Rafael [US/US]; 4203 Colfax Avenue, Unit B, Studio City, CA 91604 (US).

[Continued on next page]

(54) Title: SKULL-MOUNTED ELECTRICAL STIMULATION SYSTEM AND METHOD FOR TREATING PATIENTS



(57) Abstract: A system and method for applying electrical stimulation or drug infusion to nervous tissue of a patient to treat epilepsy, movement disorders, and other indications uses at least one implantable system control unit (SCU) (110), including an implantable signal/pulse generator (IPG) and one or more electrodes (152, 152'). The IPG is implanted in the mastoid area (143) of the skull (140) and communicates with at least one external appliance (230), such as a Behind-the-Ear (BTE) unit (100). In a preferred embodiment, the system is capable of open- and closed-loop operation. In closed-loop operation, at least one SCU includes a sensor, and the sensed condition is used to adjust stimulation parameters.

WO 2005/062829 A2



Published:

— without international search report and to be republished
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.